

From Paediatrics to Child and Adolescent Health: A History of the Development of a Department

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ABSTRACT

The University of the West Indies (UWI) Faculty of Medical Sciences (FMS) at Mona, established in 1948, has had a long history of improving the lives of Caribbean people, including its children, through teaching and training of medical staff, research and intellectual leadership and public service. Similar to the history of child health development worldwide, the most rapid advances occurred subsequent to the establishment and development of a Department focussed on the needs of children. The FMS staff were initially expatriate lecturers and general paediatricians who trained Jamaican and Caribbean graduates. In 1972, 24 years after the establishment of the UWI and the FMS, the Paediatric Department was fully staffed by Caribbean nationals for the first time. Today, the Department of Child and Adolescent Health at the Mona Campus has almost every recognized paediatric subspecialty among its current staff of Caribbean nationals.

The intake of undergraduate medical students moved from 33 in 1948 to 380 in 2013. Undergraduate training was the initial focus of the new university, but when the need for postgraduate training was, the UWI responded and postgraduate training commenced in 1969, some 21 years into the life of the Faculty. Postgraduate medical training was pioneered by the Department of Paediatrics. Postgraduate paediatric training, initially only available at the Mona Campus, was later extended to other Caribbean countries.

This paper reports on the development of a Department of Child and Adolescent Health, with a focus on the development of undergraduate and postgraduate teaching and training programmes and their impact. Departmental successes and challenges in this area are also discussed.

De la pediatría a la Salud del Niño y el Adolescente: Historia del Desarrollo de un Departamento

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RESUMEN

Facultad de Ciencias Médicas (FCM) de la Universidad de West Indies (UWI) en Mona, establecida en 1948, ha tenido una larga historia en su empeño por mejorar la vida de la gente del Caribe – incluidos sus hijos –, a través de la enseñanza y formación del personal médico, la investigación y el liderazgo intelectual, y el servicio público. De manera similar a la historia

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del desarrollo de la salud infantil a nivel mundial, los avances más rápidos ocurrieron tras el establecimiento y desarrollo de un departamento destinado a la atención de las necesidades de los niños. El personal de la FCM estuvo inicialmente constituido por profesores expatriados y pediatras generales que tuvieron a cargo la formación de graduados jamaicanos y caribeños. En 1972 – veinticuatro años después del establecimiento de UWI y la FMS -- el Departamento de Pediatría estaba ya completamente formado por personal de nacionales del Caribe. En la actualidad, el Departamento de Salud del Niño y del Adolescente del Campus Mona, tiene ya entre su personal actual de nacionales del Caribe, casi todas las subespecialidades pediátricas reconocidas.

El ingreso de estudiantes de medicina de pregrado pasó de 33 en 1948 a 380 en 2013. La formación de pregrado fue el enfoque inicial de la nueva universidad. Pero cuando se produjo la necesidad de la formación de posgrado, UWI respondió y la formación de posgrado comenzó en 1969, tras unos 21 años de vida de la Facultad. La formación médica de posgrado fue liderada por el Departamento de Pediatría. La formación pediátrica de posgrado, inicialmente sólo disponible en el campus de Mona, se extendió posteriormente a otros países del Caribe.

El presente trabajo informa sobre el desarrollo de un departamento – el Departamento de Salud del Niño y el Adolescente – enfocado al desarrollo de programas de enseñanza y formación de pregrado y posgrado, y su consiguiente impacto. Asimismo, se examinan los éxitos y desafíos en esta área departamental.

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The establishment and development of UWI Departments of Paediatrics and Child Health

Paediatrics within the Department of Medicine

In 1948, when the first medical students entered the University College of the West Indies (UCWI), paediatrics was an established medical specialty in the Western world. In the new medical school, however, paediatrics was within the Department of Medicine. Four clinical teaching staff, comprising one professor and four senior lecturers, were appointed to the Department of Medicine in the academic year 1950–51 to facilitate the commencement of clinical teaching in October 1951. Among them was paediatrician, Dr Brian Jelliffe, a member of the Royal College of Paediatricians in the United Kingdom (UK), who had completed a Diploma in Tropical Medicine and Hygiene in England. He was appointed Senior Lecturer in Paediatrics (1). Other paediatric staff, including a registrar, a senior house officer and an intern, were employees of the affiliated University College Hospital of the West Indies (UCHWI). Hurricane Charlie, with winds near Category 3, hit Jamaica directly in August 1951, causing 125 deaths and US\$50 million in damages (1). The destruction and shortage of supplies caused by the hurricane were among the factors that delayed the expected opening of the UCH until September 1952 and the

official opening by Sir Hugh Foot until January 1953. As a result, clinical teaching initially occurred at the Kingston Public Hospital, with staff from both hospitals participating. The UCWI recorded its appreciation to the staff of the government hospitals.

The UCHWI also required approval from the University of London prior to the commencement of clinical teaching. Dr Thomas Hunt visited in June 1952, and his report led to the UCHWI being recognized as a teaching hospital preparing students for the University of London Bachelor of Medicine and Bachelor of Surgery (MB, BS) Degree until the end of 1954. The 1954 inspection allowed recognition for a further period. The UCWI became the UWI by a new Charter in 1962 and the UCHWI became the University Hospital of the West Indies (UHWI). In 1962, University of London recognition was replaced by accreditation from the General Medical Council in the United Kingdom. This continued until the establishment of the Caribbean Accreditation Authority for Education in Medicine and other Health Professions (CAAM-HP) in 2003. Caribbean Accreditation Authority for Education in Medicine and other Health Professions is the current accrediting body for medical, veterinary, and dental schools, operating under the aegis of the Caribbean

Community (CARICOM), a regional organisation of twenty countries.

When the UCHWI opened in 1952, one of the four medical wards, with 36 beds was assigned for medically ill children. Children with surgical problems were housed with adult women on a surgical ward (Ward 1) and ill newborns were in a small room in the Obstetric Block (2). Dr Jelliffe was responsible for paediatric services until his resignation in 1954 to take up a World Health Organization (WHO) position in India (2). He was replaced by Dr Eric Back, another British paediatrician.

The need for paediatric well-child-care services, as well as a site for teaching well-child-care led to the establishment of a UCHWI Child Welfare Clinic in 1957 by the paediatric staff. The Children's Welfare Clinic in Gordon Town also came under the administration of the UCHWI at that time (1).

On August 1, 1960, paediatrics was recognized as a sub-department of Medicine. This did not occur in isolation, but was in keeping with trends throughout the University at this time. Biochemistry and Pharmacology were recognized as sub-departments of Physiology and Anaesthesia was recognized as a sub-department of Surgery. Sub-departments were the pre-cursors to independent departments (1). The department of Bacteriology (later renamed Microbiology) was made a full department, distinct from Pathology, at this time as well. Sub-department status of paediatrics was associated with provision of an additional lecturer's post, this was filled by Dr Joan Angus, a British national, who was formerly a Senior Registrar.

Physical improvement also accompanied this change in status. A 'temporary' Paediatric Block, with two medical wards and one surgical ward, with a total of 78 beds, began construction in 1960 and was completed in 1961. A more permanent structure was not possible due to financial constraints (2). In keeping with the expanded bed capacity, the UCHWI provided additional staff. In the Casualty Department, four paediatric cots were added to the Observation Ward, and paediatrics was assigned its own Outpatient Department, separate from that of Medicine (2). In 1962, the first two floors of the new Obstetric Block was constructed, and the Special Care Nursery with 40 cots was housed on the second floor. The third floor, with the labour and delivery wards, was not completed until 1963. The Special Care Nursery nursing staff were administratively governed by the Department of Obstetrics and Gynaecology, but the medical staff were from the Department of Paediatrics, still housed within the Department of Medicine.

Paediatrics as an independent department

Paediatrics became an independent Department on January 1, 1964 and an additional lecturer's post was assigned (2, 3). A lecturer's post also became available on the resignation of Dr Angus in 1961. The late 1950s and early 1960s saw the return of Jamaican nationals who had received their undergraduate and paediatric training overseas, primarily in the UK. Originally appointed as registrars, they were promoted to lecturer positions as overseas staff resigned or returned to their countries of origin. Dr Colin Miller was the first Jamaican lecturer appointed to the new department in 1964. He had joined the staff of the Department of Medicine in 1958 as Registrar and was appointed Senior Registrar in Paediatrics in 1962. In 1966, the first Chair in Paediatrics was established; Dr Eric Back was appointed the first Professor of Paediatrics.

Development and support of early academic staff

The medical school increased its intake of students from thirty to forty per year in the 1940s and 50s, to 120 in the 1970s. Paediatric academic staff numbers failed to keep pace with this expansion, with only two UWI academic staff positions until 1974 (2). Between 1966 and 1971, a third lecturer's post was made possible by a grant from the Josiah Macy Jnr Foundation. This grant also funded a health nurse and a research assistant up to 1971. At the end of the grant, the UWI maintained the lecturer's post and added a fourth in 1974 (2, 4). The academic staff shortage was relieved somewhat during the period 1962 to 1969, when staff from the Hospital for Sick Children in Toronto, Canada, through their Staff Fund, provided visiting lecturers on a range of paediatric topics for four to six week periods (3, 4). Visiting lecturers participated fully in teaching and patient care and also visited the Windward and Leeward Islands and held postgraduate sessions in paediatrics with hospital registrars. The University of the West Indies academic staff, in a reciprocal exchange programme arrangement, also visited the Hospital for Sick Children. Among the first to do so were Professor Back, in the capacity of visiting professor and Dr. Colin Miller, who studied paediatric cardiology for a three-month period (1–4).

In 1971, the SS HOPE visited Jamaica and, following discussions with the UWI and the Government of Jamaica, Project HOPE agreed to assist the development of the postgraduate training programmes. In paediatrics, Project HOPE provided a consultant paediatrician and senior residents on a three-month rotational basis (2).

Staff assisted with both patient care and teaching until 1974, when the project ended.

Associate lecturers appointed to BCH and hospitals in other Caribbean countries

Undergraduate medical students had been visiting the Kingston Public Hospital and the BCH to ensure broad clinical exposure since the mid-1950s. Visits were facilitated by the excellent relationships between the paediatric staff at the UCHWI and the BCH since the inception of the medical school. Dr Leila Wynter-Wedderburn, the first Senior Paediatrician at the BHC, welcomed the first medical students. She was recognized by the UWI as a part-time lecturer and later associate lecturer; she held the post of associate lecturer until her retirement from the public health service in 1969. In 1967, curriculum changes resulted in students spending ten full weeks in paediatrics, rather than the 13-week part time exposure that had previously existed. The curriculum changes resulted in students from two consecutive class years requiring training in paediatrics in the same year. This, in association with the general increase in students to 70–80 per year, without expanding physical facilities or increase in paediatric teaching staff at the UHWI, led to the expansion of the undergraduate teaching programme to the BHC, and the beginning of a more structured teaching arrangement with staff there. Another consultant paediatrician at the BHC, Dr Elaine Read, was appointed associate lecturer in 1967. Associate lecturers in Paediatrics were also appointed at the General Hospital in Port of Spain, Trinidad and the Queen Elizabeth Hospital in Barbados at this time (3). In 1971, when student numbers increased to 110 students per year, all students were required to spend three weeks of a ten-week paediatric rotation at the BHC, being taught by paediatricians there. These changes resulted in further appointments of associate lecturers at BCH in 1970. These appointments were historical; Dr Keith McKenzie and Dr Barbara Johnson were the first graduates of the UCWI to be appointed to paediatric academic posts at the UWI. Dr McKenzie was a member of the first cohort and Dr Johnson, a member of the second cohort of UCWI medical students.

Caribbean nationals and graduates as academic staff

At the end of 1970, all paediatric academic staff, with the exception of Professor Back, was of Caribbean origin, and many of the registrars were graduates of the UCWI, as compared to the earlier years, when registrars

were primarily British nationals. In 1972, when Dr Colin Miller was appointed the first Jamaican Professor of Paediatrics on the resignation of Professor Back, all academic staff were of Caribbean origin for the first time.

Some Jamaican academic staff members resigned for a variety of reasons, including entering private practice and migration. When these staff members left full time academic appointments, and remained in Jamaica, they often maintained their association and continued contributing to the development of the department through appointments as associate lecturers.

In 1998, Dr Celia Christie became the first graduate of the DM Paediatric programme to be appointed a UWI Professor of Child Health. Currently, the department has four full time (4) professors, all of whom are graduates of the DM programme.

Development of sub-specialty areas in paediatrics

The paediatricians of the 1950s and early 1960s were general paediatricians. Some had their own special interests and others developed special expertise in clinical areas that were of importance because of prevalence or severity of disease conditions. Dr Jelliffe, with his special interest in tropical diseases, focussed on the main clinical concerns of the time: Jamaican Vomiting Sickness (later identified to be due to ackee poisoning), Veno-Occlusive Disease of the Liver (later identified to be due to specific bush teas), worm infestation, malnutrition (kwashiorkor and marasmus) and sickle cell-disease (3). Dr Back's interests were in rheumatic fever, childhood anaemia, gastro-enteritis and malnutrition and Dr Miller's initial interests were in anthropometry, renal diseases, umbilical hernia and congenital heart disease (3). Outbreaks of diphtheria and tetanus in 1964 and congenital rubella in 1965 also focussed interests in these areas.

Specialist paediatric care had its beginnings in the late 1960s, when opportunities for training of UCWI and Caribbean graduates of other universities arose. Dr Colin Miller's training in paediatric cardiology was facilitated by a Rockefeller Foundation grant and built on an initial interest in congenital heart disease. On his return to Jamaica, he established the first paediatric subspecialty clinic in cardiology in 1969 (4). Cardiac catheterisation and cardiac surgery were started in conjunction with the Departments of Radiology and Surgery. Dr Robert Gray's return to Jamaica in 1968 heralded the development of paediatric neurology.

Further development of subspecialties occurred slowly, hindered by the limited increase in academic

posts subsequent to the establishment of the independent Department in 1964. In 1973, the appointments of Dr Mike Lowry and Dr J Robinson-von Avery fuelled the development of neonatology and community and ambulatory paediatrics, respectively, and led to the inclusion of these specialties in undergraduate and postgraduate curricula. These pioneers so established the areas of cardiology, neonatology and community and ambulatory paediatrics that when they left the UWI and Jamaica, teaching and clinical services in these subspecialties continued. In 1980, neonatology was continued by Dr Rudy Boersma, who was supported by the Government of the Netherlands to develop a perinatal programme in conjunction with the Department of Obstetrics and Gynaecology. Neonatology teaching and clinical service were later continued by Dr Matthias Antoine and Dr Ernest Pate; cardiology by Dr Doreen Millard and community and ambulatory paediatrics by Dr Angela Ramlal, all graduates of the UWI DM Paediatrics programme. Dr Robert Gray continued to provide neurology teaching and clinical services.

In the mid to late 1980s, there was another phase to subspecialty paediatric development. The first set of graduates from the UWI, trained in established two to three year specialty training programmes overseas returned to Jamaica. Dr Maolynne Miller, paediatric nephrologist; Dr Leslie Gabay, paediatric endocrinologist and Dr Judy Tapper, paediatric neurologist, on their return immediately sought to contribute to the development of paediatrics. As more graduates returned home, the undergraduate and postgraduate programmes were enriched and the specialty clinics and services available broadened. A combination of limited full time academic posts and personal choice resulted in specialist paediatricians being appointed as part-time or associate lecturers at UWI or full time consultant paediatricians at the UHWI.

In the 1990s, specialist services were available in cardiology, developmental and behavioural paediatrics, endocrinology, gastroenterology, infectious diseases, neonatology, nephrology, neurology and rheumatology. In the next decade and a half, 2000–2012, paediatric subspecialties in asthma and allergy, adolescent medicine and haematology and oncology were added. However, some specialties such as gastroenterology and rheumatology were available for a few years in the 1990s, but terminated when the single specialist paediatrician in these fields left Jamaica for personal reasons. Specialist services in nutrition, pulmonology and sickle cell disease have been supported for many years through affiliation

with specialist paediatricians and nutritionists at the Caribbean Institute for Health Research (CAIHR), formerly the Tropical Medicine Research Institute (TMRI), a special unit at the UWI. Some specialty areas, such as neonatology, cardiology, neurology and developmental and behavioural paediatrics now have more than one specialist paediatrician. The Child Welfare Clinic which commenced in 1957 also continues to today, and is an important clinic for providing undergraduate and postgraduate students with primary healthcare exposure.

The development of training programmes in paediatrics

Undergraduate

The Statistical Institute of Jamaica reports, that there was a total of 748 088 children in 2016, representing just over 27% of the total population of 2.7 million (5). Undergraduate medical students, who will later become Jamaica and the Caribbean region's general practitioners, must therefore, be very knowledgeable about children's health and development. The Faculty of Medical Sciences' Department of Paediatrics, later renamed the Department of Child and Adolescent Health, has been providing undergraduate training for medical students since its establishment as an independent department in 1964. Prior to this, paediatrics was taught as a part of adult medicine.

As mentioned earlier, prior to 1967, students spent part of a 13-week exposure in adult medicine learning paediatrics. Mornings were spent in the study of hospital-based paediatrics and afternoons in other specialist Departments (2). In 1967, with the growing recognition of the importance of paediatrics to the study of medicine, a full time ten-week rotation in paediatrics was introduced in the penultimate year of study, the second clinical year (2, 3). This rotation included exposure to hospital wards and clinics at both the UHWI and the BCH, well-child clinics at UHWI and emergency paediatrics at the Emergency Department of the UHWI. In 1968, visits to rural hospitals, such as Spanish Town and Morant Bay, were included, with students travelling with consultants on their visits (2). In 1973, influenced by the presence of a community paediatrician on staff, collaboration with the Department of Social and Preventive Medicine and the Medical Social Work Department of the UHWI resulted in the introduction of community paediatrics. Students, travelling in pairs, visited homes in communities surrounding the UHWI, such as Hermitage and August Town. This welcome addition to

the hospital-based training programme, allowed for an understanding of the impact of the social environment on children, and was facilitated by the additional time devoted to paediatric training.

The next major change to paediatric undergraduate training occurred in 1980 when a five-week junior clerkship in paediatrics was instituted. In 1983, a further curriculum change resulted in students being taught typical child development in the two pre-clinical years in a course shared with the Department of Community Health. This facilitated an introduction to clinical aspects of normal development and well-child-care. In 1990, the lecture series Introduction to Child Health was instituted in the third-year. This was later discontinued and absorbed within the ten-week clerkship.

Other changes were made to undergraduate training in the late 1990s, based on the concerns of paediatric staff. First, the ten-week paediatric clinical experience took place in the fourth year, rather than the fifth and final year, as did clinical exposure in the other major specialties of Adult (Internal) Medicine, Surgery and Obstetrics and Gynaecology. These specialties and paediatrics, however, were examined together at the end of medical training in the fifth and final year. This change was deemed necessary as paediatric training was felt to be too far removed from other major specialties and the final examination. In 1997, the Child Health clerkship moved to the fifth and final year. Second, at the final examination, which was combined with Adult Medicine, students were able to perform poorly in paediatrics and still obtain a passing grade in Medicine. A separate examination in paediatrics was recommended by paediatric staff. The Academic Board of the UWI accepted the principle of a separate examination in Child Health in 1998. However, this was not effected as in 2000, a decision was taken to administer final examinations in Medicine using the Objective Structured Clinical Examination (OSCE) format to improve examination validity. Currently, six of the eighteen OSCE stations are focussed on paediatrics, with others focussed on Adult Medicine, Psychiatry, Dermatology and Community Health.

The current undergraduate student has two exposures to clinical paediatrics, a junior and senior rotation. The four-week junior rotation takes place in the third of the five clinical years and includes two weeks on the paediatric wards (UHWI and BHC), one week in the casualty department and the other in the well-baby clinic and domiciliary post-natal services. The junior rotation provides an introduction to different aspects of paediatric

care, but also focusses on the art and science of history taking, the basis of medicine. The ten-week rotation in the fifth and final clinical year provides more experience in inpatient paediatric care. Currently, students obtain this clinical experience at the UHWI, as well as Spanish Town, Mandeville Regional, Cornwall Regional and May Pen hospitals. The utilisation of clinical training sites outside of UHWI and the BHC occurred due to two factors: the increase in undergraduate student intake in the Faculty of Medical Sciences and the employment of consultant paediatricians at hospitals across the country, many trained at the UWI.

Despite the two clinical exposures in paediatrics, many students feel they need more paediatric exposure than is included in the curriculum and paediatrics is a common elective rotation in the fourth clinical year.

Postgraduate

Informal paediatric postgraduate training

Informal postgraduate paediatric training began in 1961, when the Rockefeller Foundation provided grants for travel for UWI staff to the Caribbean Islands. Visits were made in this year to Trinidad and Tobago, Barbados, Grenada, St Lucia, St Kitts and Nevis, and Antigua and Bermuda. Visits were also made in 1961 to assist in clinical care in Islands hit by Hurricane Hattie. Visits to the Cayman Islands and The Bahamas, to Antigua and Bermuda to advise on the establishment of the new children's ward and to offer guidance on the treatment of rabies and on training of interns in British Honduras occurred in the late 1960s.

The Rockefeller Foundation Grant also allowed registrars from Barbados to visit and work in the paediatric sub-department at UCHWI/UHWI as supernumary registrars in the early 1960s. Some registrars opted to undertake this informal training, prior to entering postgraduate paediatric programmes in the United Kingdom.

The first structured paediatric postgraduate training programme was a series of staff conferences on gastroenteritis, malnutrition and prematurity held in the Leeward and Windward Islands for doctors, public health and hospital nurses and public health inspectors in 1963. The lecturers included UWI paediatricians as well as Dr Kenneth Standard from the Department of Social and Preventive Medicine, the sister in charge of the UHWI paediatric ward and WHO and USAID public health and nursing staff. Follow-up discussions in 1964 resulted in the establishment of a six-month course in paediatric nursing in the islands. These courses were conducted until 1966.

Once the Department of Paediatrics was established in 1964, registrars (residents) and house officers travelled to Jamaica from the Caribbean for training. Registrars often left this informal programme to take up consultant paediatric positions in Caribbean countries, such as Antigua and Bermuda, and Barbados.

Establishment of the DM paediatrics programme at Mona

Prior to 1970, the focus of training programmes was at the undergraduate level, though there was recognition of the need for a structured postgraduate training programme (2).

In 1969, regional Ministers of Health recognized the need for postgraduate training and made a recommendation to the UWI (6). The then Faculty of Medicine presented a position paper at the 1970 Health Ministers Conference. The paper, taking note of the limited staff, resources and equipment at the UWI, identified the basic needs for postgraduate training as dedicated trainee posts, adequate academic staff to reduce clinical workload, technical and ancillary staff, accommodation for trainees, equipment, dedicated funding for postgraduate teaching and research. The paper included a detailed proposal for the development of four-year training programmes, the Doctors of Medicine (DM), on the three existing campuses (6).

Probably spurred by this regional development, as well as the residents already accessing training at the UHWI, the Department of Paediatrics was the first to offer postgraduate medical training at UWI. Regular postgraduate training seminars for house officers and residents commenced in 1969 (2) and the first specialist resident training positions in paediatrics were filled by Dr Eve Palomino-Lue in 1970 and Dr Doreen Millard in 1971 (4). Postgraduate teaching in paediatrics, as well as in medicine, surgery, obstetrics and gynaecology, anaesthetics, radiology and psychiatry, was supported significantly by the staff from Project HOPE (6). The input of Project HOPE staff from 1971 to 1974 not only ensured the success of the burgeoning programme, but also allowed its expansion to include doctors at the BHC in 1972 (2). Formal approval of the DM Regulations lagged behind programme delivery; this occurred in 1972 and was followed by registration of the first eight candidates (4). Candidates were allowed exemptions based on their years of clinical training. Dr Palomino-Lue, the first graduate of the DM programmes at UWI was awarded the DM in Paediatrics in 1973. In 1974, she became the first graduate of the

DM programme at the UWI to be appointed to an academic post as lecturer.

The early DM students were required to spend six months in internal (adult) medicine. This ceased when the content of the paediatric curriculum required that all four years be spent in paediatrics. The DM Regulations requires students to produce a case series of 20 cases or a research project. In the 1980s, in order to fulfil requirements for research, students spent periods of six months to a year at the two main research units at the UWI at the time, the Sickle Cell Unit and the Tropical Medicine Research Unit at the TMRI. This resulted in a number of departmental publications in malnutrition and sickle cell disease. In the 1990s, students were encouraged to broaden the areas of research in paediatrics and interest in case studies reduced significantly. This was facilitated by increasing research expertise among paediatric academic staff. Currently, DM student research projects are undertaken by every student; these projects often result in peer-reviewed publications which have become important contributions to the Caribbean paediatric research literature.

The diploma in Child Health and expansion of training programmes to the Caribbean

In the 1970s, it was felt that there was need for a shorter postgraduate programme in paediatrics. The one-year Diploma in Child Health (DCH) commenced in 1975. Paediatricians in the Caribbean reported a demand for this programme. As a result, Dr Esther Archer, paediatrician at the Queen Elizabeth Hospital in Barbados spent a year at the UWI, prior to being appointed the first lecturer in paediatrics in Barbados in 1976. The (DCH) was first offered in Barbados and Trinidad and Tobago in 1980 and was extended to The Bahamas in 1982. As a result, the first associate lecturer in The Bahamas was appointed at this time. The DCH ceased in the 1980s, as a result of need for limited academic staff to focus on the growing numbers of students in the DM programme and concerns about graduates functioning as fully qualified paediatricians. The DCH, however, was important in setting the stage for the DM programme to be offered in Barbados and Trinidad and Tobago.

When the DM programmes began in Barbados and Trinidad and Tobago, students were required to spend a year at the UWI Mona Campus, to fill gaps in paediatric training at these burgeoning training sites. Once these Paediatric Departments developed, the requirement of training at Mona ceased. The most recent expansion of the DM training programme has been to The Bahamas in

2007. Bahamian students currently spend training time at the Mona Campus.

Further developments in the DM paediatrics programme

The next major development in the DM Paediatric programme was the introduction of two parts to the examination, in line with other postgraduate medical training programmes at UWI. The DMI curriculum is undertaken in the first two years of the paediatric programme and includes basic and community paediatrics and an understanding of pathophysiology. Success at the DMI programme and examination is required before proceeding to the DM II curriculum, which forms the final two years of the programme. The DMII is focussed on a more detailed understanding of paediatric disease processes and their management, professionalism and research. Successful completion of the DMII programme and examination result in the DM Paediatrics degree being awarded.

Subsequent to 1997, the main changes to the DM programme have been in the exposure to clinical subspecialties facilitated by training of academic staff and in the examination process. In keeping with modern assessment methods to improve the reliability and validity of the written and clinical aspects of the examinations, multiple choice examinations and OSCE examinations were introduced. In 2013, continuous assessment of clinical skills was introduced to the examination process.

In 2001, consequent on the expansion of the postgraduate programme, the first Child Health Retreat for lecturers in Jamaica was introduced. In 2002, the biennial regional retreat was introduced to assist with programme development and standardisation across campuses. The retreats were also used to discuss undergraduate programmes.

Programme output

From its original intake of eight candidates in 1969, the DM programme had 20 students enrolled in the four year programme in the 1990s. In 2016, there were 52 students enrolled at the Mona Campus, comprising primarily those enrolled at Mona, but also including a few students from The Bahamas. There have been 146 graduates from 1973 to 2016. The programme is the most frequent qualification for consultant paediatricians in the region with more than 80% of graduates remaining in the region (8).

Academic staff growth and development

In the 1980s, the demand for postgraduate training in paediatrics increased significantly, while the total academic staff remained at four. A number of Jamaican paediatricians contributed to the academic development of the department as part-time or associate lecturers. This was particularly important, because of their specialist training. In 1981, there were four full time UWI academic positions, six associate lecturers and four part-time lecturers. There was also a total of six associate lecturers and one honorary associate lecturer in Barbados, Trinidad and Tobago, and St Lucia. In 2000, academic staff increased to seven full time staff, comprising one professorial position, five lecturer/senior lecturer posts in paediatrics and one lecturer post in psychology. A public health nurse, who taught undergraduate students in the well-child clinic, was also on staff. However, there were 17 associate and part time lecturers. In 2016, there were ten full time academic staff, comprising four professorial positions, five senior lecturer/lecturer positions in paediatrics and one in psychology.

With the increase in number of undergraduate students and the resulting expansion of undergraduate programmes to other hospitals, the increased intake of postgraduate students and the resulting demand for postgraduate examiners, without a concomitant increase in full time academic staff, the number of associate lecturers is currently twenty-five. Associate lecturers now include consultant paediatricians at BHC and Cornwall Regional, Mandeville, Spanish Town, Savanna-la-Mar and St Ann's Bay hospitals.

The most recent trend in staff development is additional training and qualification in research. This commenced in 1983, when the paediatric research officer assigned to the Jamaican Perinatal Mortality and Morbidity Survey, which was located within the Department of Paediatrics, was awarded a Carnegie Corporation Fellowship. The Fellowship allowed Dr Maureen Samms-Vaughan, a graduate of the DM Paediatric programme, to complete a PhD in Epidemiology at Bristol University in 1989; she returned to the department in 1993. This was the beginning of a new phase of research training throughout the UWI, as Dr Samms-Vaughan was the first UWI medical staff member to also complete doctoral training in research. Dr Minerva Thame, another DM graduate, completed her PhD at the TMRU and joined the Department in 2001. Since then, four of the current staff members have completed Masters degrees in

Epidemiology or Public Health, facilitated by the development of these programmes at the UWI; others have completed research fellowships at the TMRI. These developments have enhanced the research output of the Department.

Departmental name changes

There have been four changes in the name of the Department since its inception, most reflecting modern trends in the field, while one reflected a UWI senior administrative decision. In 1976, no doubt influenced by ambulatory paediatric specialist, Dr Von Avery, there was a name change from Department of Paediatrics to Department of Child Health. This was in keeping with the recognition of the wider social and environmental factors impacting children's health and a broader definition of health. Dr Von Avery wrote that paediatrics must not only be available in the community, but of the community, with paediatricians having a social consciousness to understand people as well as disease. The paediatrician was to be seen as the leader of the health team, co-ordinating the combined efforts of social workers, public health and other health workers (7).

The second occurred in 1996, when the UWI administration took the decision to merge two Departments and create a single Department of Obstetrics, Gynaecology and Child Health. The Department of Child Health became the Section of Child Health in this new department. In August 2010, the Department was re-established as an independent Department of Child Health. The most recent change occurred in 2012, when the department was re-named the Department of Child and Adolescent Health. This name change acknowledged the services provided to adolescents over the years, but also recognized the appointment of Dr Abigail Harrison, a DM graduate who returned to Jamaica with specialist training in adolescent medicine.

Departmental successes and challenges

Services to children and families:

The department's success in providing care for children through its training programmes can be measured in one way by the number of children provided with paediatric care at the UHWI. In 1981, the Department reported that it had provided services to over 20 000 children as outpatients in the Casualty Department and four clinics (general, community and ambulatory, cardiology, neurology), to just under 9000 in the well-child clinic and

to 1153 inpatients in the original 44 medical beds and 621 in the original newborn nursery. In 2000, inpatient admissions to the medical wards increased to 1300 and newborn special care nursery admissions to 800.

In 2016–2017, there were 1004 inpatient medical admissions and 387 newborn special care admissions. The fall in inpatient numbers was primarily a result of the implementation of a no user fee policy (free health-care) for all children by the Government of Jamaica in 2007; this was extended to the entire population in 2008. As the UHWI is not a public hospital, this resulted in an increase in patient numbers at the BHC and a fall at the UHWI. Additionally, there has been a general trend in medicine to increase ambulatory care services. Outpatient services were provided to 937 new and 7837 returning children (and their families) in one primary care child welfare clinic and ten specialty clinics: adolescent medicine, asthma and allergy, cardiology, developmental and behavioural paediatrics, endocrinology, haematology/oncology, infectious diseases, neonatal, nephrology and neurology.

However, this would be a very limited assessment. More important are the numerous children and families all across the Caribbean who have been provided with high quality paediatric care and services by the graduates of the DM programme. Our graduates currently provide paediatric services in all thirteen of the English speaking CARICOM full member states; Haiti and Surinam are non-English-speaking members.

Additionally, general practitioners who have been trained in the undergraduate programme in paediatrics/child health at the Mona Campus are also providing services to children in these English-speaking CARICOM states.

Departmental challenges

Departmental challenges over the years have been in two main areas, physical and human resources. The UHWI paediatric block was constructed as a temporary facility in 1964. From as early as the 1970s, limited bed space for patients at both UHWI and BHC was identified. At the UHWI, in 1974, paediatricians determined that there was need for an additional medical ward, an additional surgical ward and an adolescent ward. These were requested in the UHWI Triennial budget 1975–1978, but were not able to be received. Plans for a new Department, complete with architectural design, were advanced in 1992 and were revived in 1998. In 1998, a modern lecture room was added to the existing structure, with funding provided

by Citibank. The newborn nursery was refurbished in 2002, resulting in a defined four-bed ICU unit, with 30 additional beds and importantly, a room for parents to stay overnight. In 2017, the outpatient department was renovated. New plans for the Special Care Nursery and the paediatric wards have been developed in association with plans for the development of an entire new UHWI plant.

Administrative offices have also not kept pace with departmental development. As a result, limited bed space on medical wards became even more limited when some individual patient rooms were converted to staff offices. A 2013 refurbishment of the two paediatric wards added a few individual patient rooms. Overall, the physical facilities and bed complement have changed little since 1964; the total bed complement of the medical wards is now 44, and that of the newborn special care nursery is 30.

In the 1980s, limited academic staff prevented the growth of training programmes. There were also few resident positions assigned by the UHWI. Though the situation improved somewhat in the 1990s, growth in academic staff positions has never kept pace with growth in postgraduate or undergraduate programmes. In the 1990s, the growing nursing shortage reached a critical point, resulting in the closure of a medical ward in 1993. The following year, there was an influx of nurses from Nigeria and Ghana, and the ward was reopened. The year 1993 was a particularly difficult one for the Department. Apart from the ward closure, there was a decline in applications for postgraduate training, withdrawal of students from the DM programme and lecturer positions were vacant and were not attractive to paediatricians. Subsequently, there was renewed interest in the programme and in lecturer positions and this has continued to today.

Conclusion and future direction

The current Department of Child and Adolescent Health at UWI, Mona, has seen many advances since its beginnings as a sub-department of internal medicine. This story of the past and present can be re-told numerous times throughout the Faculty by its various Departments, as the development of the Department of Child and Adolescent Health, and its teaching and training programmes, is similar to that of many of the Departments in the Faculty of Medical Sciences.

Some experiences were, however, unique to paediatrics. After establishment and operation as an independent Department for a number of years, there were quite a

few years of being a section of a Department, before full departmental status was re-established as a result of persistent lobbying by paediatric staff. The development of the Department of Child and Adolescent Health and its resulting accomplishments are testament to the resilience and commitment of its staff. Progress in clinical service and teaching were made despite significant human resource constraints, inadequate physical facilities and limited administrative support.

The support of the UHWI in the provision of consultant posts was invaluable to departmental development. However, also critical to departmental development, was the selfless contributions by many paediatricians who were neither full time academic staff members or consultant paediatricians employed to the UHWI, but had various titles as part-time lecturers, associate lecturers or sessional lecturers, with limited remuneration. Their service, together with that of the academic staff, made the department the success it is today.

But, we must now look to the future. Further development of the Faculty of Medical Sciences, in this age of technological advances in medicine, will require investments in more specialised human resources. The next developmental phase for the Department of Child and Adolescent Health is the establishment of subspecialty programmes in paediatrics at the UWI. However, this can only be undertaken in areas where a critical mass of specialty paediatricians exists. The Department has had unfortunate experiences of losing two subspecialties it once had due to migration of the single staff members trained in this field. There is also need for improvement in infrastructure, including both buildings and equipment.

The health and development of a nation are determined by the health and development of its children. A 2012 Lancet editorial (9), taking into account current knowledge, identified the five health priorities for sustainable development as women's reproductive health and education, early childhood development, adolescent health, non-communicable diseases and the provision of healthcare services for the elderly. The importance of children is evident as the first three of these priorities are directly related to child health and development. The article explains that half of the reduction in under-five mortality in recent years is attributed to women's educational achievement; that focussing on the early years is critical to solving the problem of health inequity in adulthood and that there are huge benefits to adolescent health and development by paying attention to better educational and preventive health measures.

The Department of Child and Adolescent Health is well suited to make an even greater and more significant impact on the health and development of Jamaica and the Caribbean's children, and in so doing, on our adult societies. As such, the Department dares to suggest that specific attention and investment must be paid to this specialty.

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